I. Transformations (pp.132-136) —

1. Translation (shift up/down/left/right):
   - \( y = f(x) + k \) is \( y = f(x) \) shifted vertically “k” units upward \((k > 0)\) or downward \((k < 0)\)...
   - \( y = f(x+k) \) is \( y = f(x) \) shifted horizontally “k” units to the left \((k > 0)\) or to the right \((k < 0)\)...

2. Reflection (180° rotation about coordinate axis):
   - \( y = -f(x) \) is \( y = f(x) \) rotated \( w.r.t. \) \( x\)-axis
   - \( y = f(-x) \) is \( y = f(x) \) rotated \( w.r.t. \) \( y\)-axis

3. Stretch/shrink (vertical elongation/contraction):
   - \( y = k \cdot f(x) \) is \( y = f(x) \) elongated vertically when \( k > 1 \) or contracted vertically when \( 0 < k < 1 \), by a factor of “k”...
II. Examples (p.143): Exercises #12,16

III. Symmetry (pp.138-139) —

the graph of \( y = f(x) \) is symmetric \( w.r.t. \) the...

1. \textbf{y-axis} \iff \[ f(x) = f(-x) \quad a.k.a. \text{even function} \]
   \begin{itemize}
   \item \textit{i.e., if} \((x,y)\) \text{lies on graph, then} \((-x,y)\) \text{lies on graph.}
   \end{itemize}

2. \textbf{origin} \iff \[ f(x) = -f(x) \quad a.k.a. \text{odd function} \]
   \begin{itemize}
   \item \textit{i.e., if} \((x,y)\) \text{lies on graph, then} \((-x,-y)\) \text{lies on graph.}
   \end{itemize}

IV. Examples (p.144): Exercises #54,58

HW: pp.143-144 / Exercises #1-29\((\text{every other odd})\),
\hspace{1cm} 35,47,51,53,59,69-81\((\text{odd})\)